

Name: \_\_\_\_\_ Period: \_\_\_\_\_ College: \_\_\_\_\_

1. Choose a College or University to attend.
2. **Create a pie chart** for the total annual cost of a college education
3. **Estimate (Guess) the percent (%)** and draw the **categories** of the following:
  1. Tuition
  2. Housing, Room & Board
  3. Books/Computers/School Supplies
  4. Spending Money: Fun/Entertainment
  5. Other Cost (Miscellaneous)

4. Use the Proportion Method to find the **Cost of an Education: First Year**

$$\frac{\text{Percent Number}}{100} = \frac{\text{Percentage}}{\text{Base}}$$

- Percent Number (40 from the 40%) is the number that you estimated!
- Percentage is the Tuition Cost of your selected College or University
- The **Base** represent what information? \_\_\_\_\_

$$\text{Penn State University} \quad \frac{40}{100} = \frac{15,000}{\text{Base}}, \quad \text{Base} = \$37,500$$

5. Use the Equation Method to find the other parts (percentages) of the pie chart?  $\text{Percentage} = \text{Base} \cdot \text{Rate}$

Category	Percent (%)	Percentage (\$)	Degrees (°) {A full circle has 360°}
Tuition	40%	Penn State \$15,000	$\frac{40}{100} = \frac{\text{Percentage}}{360}$ P=144°
Housing / Food Expense	30%	$\text{Percentage} = 37,500 \cdot 0.30$ $\text{Percentage} = \$11,250$	.or compute it with $\text{Percentage} = 360 \cdot 0.30$ P=108°
Books, Computer & School Supplies	15%	\$5,625	.or compute it with a proportion $\frac{3,750}{37,500} = \frac{\text{Part}}{360}$ P=54°
Spending \$	10%	\$3,750	P=36°
Miscellaneous	5%	\$1,875	P=18°

6. How do we check our calculations?

Name: \_\_\_\_\_ Period: \_\_\_\_\_ College: \_\_\_\_\_

7. Fill in the pie chart.
  - Percent
  - Percentage
  - Category
8. Predict the total cost of education with a percent increase of 10% per year for 4 years.
  - How do you go about finding the cost per year for 4 years.
9. Reflection
  - What have you learned about the cost of college?
  - What can you do now to prepare yourself for college?
  - How did you use Algebra to evaluate the cost?
  - How can you use Pie Charts and percents for other things in your lives?
10. Extra Credit: Use the proportion method to find the number of degrees for each category in the pie chart. How many degrees are there in a circle?
11. Create a bar chart of comparing your classmates 1<sup>st</sup> year annual costs.